



## California Energy Commission

### Integrated Energy Policy Report Workshop

### Emerging Technologies for the Integration of Renewables

**July 31, 2008 - 10:00 AM – 4:00PM**

**Location:** California Energy Commission

Hearing Room A

1516 9<sup>th</sup> Street, Sacramento, California 95814

Contact phone: 916-651-0316 Mike Gravely

### AGENDA

10:00 AM **Opening Comments (Mike Gravely)**

**Energy Commission Infrastructure R&D to Support the Integration of Renewables (Mike Gravely) (30 minutes)**

- *Transmission and transmission technology research to support renewables*
- *Storage for renewable integration into the transmission system*
- *Smart grid for renewable integration into the transmission system*

**Energy Commission Renewables R & D (Gerry Braun) (30 minutes)**

- *Overview of renewable energy technologies, including commercialization status and application opportunities*
- *Renewable energy integration opportunities and considerations*
- *Energy Commission renewable energy RD&D initiatives and programs*

**Emerging Renewables Initiatives Under Review by the CPUC (Jaclyn Marks, CPUC) (20 minutes)**

- *Status and plans for emerging renewable resource program proposals by California investor owned utilities*
- *CPUC perspectives on emerging renewable energy supply and integration technologies*

**Wind Forecasting Efforts to Improve Renewable Penetration (John Zack, AWS Truwind) (30 minutes)**

- *General outline of forecasting databases and methodologies*
- *Applications of forecast information in transmission system operations*
- *Reliability and economic value of day ahead and hour ahead forecasts*
- *Timelines for commercial deployment and operational integration of forecasting tools*

**High Temperature Solar-Coupled Thermal Storage (Ray Dracker, Solar Millennium)**  
(30 minutes)

- *Commercial solar power plants that include thermal storage*
- *Operational and economic benefits to plant operators, transmission operators and electric system optimization*
- *On-going high temperature thermal storage RD&D*
- *Synergies with electricity storage and wind*

12:20 PM **Lunch** (60 minutes)

1:20 PM **Panel Discussion on Emerging Technologies to Increase the Penetration and Availability of Renewables**

- *Energy Storage: (Robert Schainker, EPRI)*
- *Emerging Technologies to increase capacity, enhance stability and mitigate congestion (Merwin Brown, CIEE)*
- *Firming intermittent energy resources (Dariush Shirmohammadi, Oak Creek Energy)*
- *Distributed Energy Resources to Increase System Renewables (Bill Steeley, EPRI)*

**Panel Discussion on Renewable Energy Deployment at Community and Distribution levels**

- *The case for Community Scale Photovoltaics (Joe, Henri, SunEdison)*
- *European models of wind energy deployment: Wind at Community and Building/Industrial Scale (Case Van Dam, CWEC)*

**Public Comments** (60 minutes)

- *ACCR (3M)*

4:00 PM **Closing Comments**